

Data Management Plan

Okeanos Explorer (EX1504L3): CAPSTONE Leg III: Main Hawaiian Islands and Geologists Seamounts (ROV/Mapping)



OER Data Management Objectives

Because the cruise is being funded by the Deep Sea Corals Research and Technology Program (DSCRTP), all data will be shared immediately with the science team via hard-drive. Data collected for exploration of the WWI era S19 submarine will be protected under the National Historic Preservation Act. Data pipelines will be managed as normal with special compensation for data collected near the marine archaeological site.

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1. General Description of Data to be Managed

1.1 Name and Purpose of the Data Collection Project

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1.2 Summary description of the data to be collected.

The ship will conduct 24 hour operations consisting of daytime ROV dives and evening/nighttime mapping operations including during transit. During this cruise we will conduct 8 hour ROV dives on most days with occasional 10 or 12 hour dives (at the ship's discretion) on particularly interesting or deep dive sites. ROV operations will focus on depths between 350 and 3,000 meters and will include high-resolution visual surveys and limited sample collection. Mapping operations will be conducted in 250 m of water and deeper, and include overnight multibeam, water column backscatter, and sub-bottom data collection. Opportunistic CTD rosette operations may be requested to collect more information about the environmental parameters at ROV dives sites, or opportunistically at selected sites where collecting the data is considered important to understanding the physical or chemical properties of the overlying water column.

1.3 Keywords or phrases that could be used to enable users to find the data.

Oahu, Big Island, coral disturbance and recovery, Geologists Seamounts, WWI S19 Submarine, expedition, exploration, explorer, marine education, noaa, ocean, ocean discovery, ocean education, ocean exploration, ocean exploration and research, ocean literacy, ocean research, OER, science, scientific mission, scientific research, sea, stewardship, systematic exploration, technology, transformational research, undersea, underwater, Davisville, mapping survey, multibeam, multibeam backscatter, multibeam sonar, multi-beam sonar, noaa fleet, okeanos, okeanos explorer, R337, Rhode Island, scientific computing system, SCS, single beam sonar, singlebeam sonar, single-beam sonar, sub-bottom profile, water column backscatter, archaeological, archaeology, conservation, conserve, crm, cultural resource management, historic, marine archaeology, maritime, maritime archaeology, nautical, nautical archaeology, preserve, protect, protection, submerged cultural heritage, submerged cultural resource, uch, underwater cultural heritage, McCall Seamount, Ellis Seamount, Swordfish Seamount, Deep Sea Corals Research and Technology Program, DSCRTP

1.4 If this mission is part of a series of missions, what is the series name?

Okeanos ROV Cruises

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1.5 Planned or actual temporal coverage of the data.

Dates: 8/28/2015 to 9/3/2015

1.6 Planned or actual geographic coverage of the data.

Latitude Boundaries: 18 to 21.6

Longitude Boundaries: -158.25 to -155.4

1.7 What data types will you be creating or capturing and submitting for archive?

SCS Output (native), Sub-Bottom Profile data, Water Column Backscatter, XBT (raw), Cruise Plan, Cruise Summary, Data Management Plan, Highlight Images, Quick Look Report, Bottom Backscatter, CTD (raw), Dive Summaries, EK60 Singlebeam Data, Expedition Cruise Report, GSF, HDCS, Highlight Video, HL Image captions/credits, HL Video captions/credits, Images, Mapping Summary, Multibeam (image), Multibeam (processed), Multibeam (product), Multibeam (raw), NetCDF, Raw Video (digital)

1.8 What platforms will be employed during this mission?

SEIRIOS Camera Sled, NOAA Ship Okeanos Explorer, Deep Discoverer ROV

2. Point of Contact for this Data Producing Project

Overall POC: Christopher Kelley, Associate Professor, University of Hawai'i at Manoa, ckelley@hawaii.edu

Title: Associate Professor

Affiliation/Dept: University of Hawai'i at Manoa

E-Mail: ckelley@hawaii.edu

Phone: 808-956-7437

3. Point of Contact for Managing the Data

Data POC Name: Susan Gottfried and Robert McGuinn

Title: OER Data Management Coordinator and DSCRTP Data Manager

E-Mail: susan.gottfried@noaa.gov and robert.mcguinn@noaa.gov

4. Resources

4.1 Have resources for management of these data been identified? False

4.2 Approximate percentage of the budget devoted to data management. (specify % or "unknown")
unknown

5. Data Lineage and Quality**5.1 What is the processing workflow from collection to public release?**

EX SCS data shall be delivered in its native format as well as an archive-ready, documented, and compressed NetCDF-3 format to NCEI-MD excluding the data within a buffer zone around the marine archaeological site; multibeam data and metadata will be compressed and delivered in a bagit format to NCEI-CO excluding the data considered "restricted". Deep Sea Corals data shall be post-processed and maintained by the Deep Sea Corals Research and Technology Program (DSCRTP).

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5.2 What quality control procedures will be employed?

Quality control procedures for the data from the Kongsberg EM302 is handled at UNH CCOM/JHC. Raw (level-0) bathymetry files are cleaned/edited into new data files (level-1) and converted to a variety of products (level-2). Data from sensors monitored through the SCS are archived in their native format and are not quality controlled. Data from CTD casts and XBT firings are archived in their native format and are not quality controlled. CTDs are processed into profiles for display only on the Okeanos Atlas.

6. Data Documentation

6.1 Does the metadata comply with the Data Documentation Directive?

True

6.1.1 If metadata are non-existent or non-compliant, please explain:

not applicable

6.2 Where will the metadata be hosted?

Organization: An ISO format collection-level metadata record will be generated during pre-cruise planning

URL: <http://www.ncddc.noaa.gov/oer-waf/> discovery and access. The record will be harvested by data.gov.

Meta Std: ISO 19115-2 Geographic Information with Extensions for Imagery and Gridded Data will be the metadata standard employed; a NetCDF-4 standard for oceanographic data will be employed for the SCS data; the Library of Congress standard, MACHine Readable Catalog (MARC), will be employed for NOAA Central Library records.

6.3 Process for producing and maintaining metadata:

Metadata will be generated via xml editors or metadata generation tools.

7. Data Access

7.1 Do the data comply with the Data Access Directive?

True

7.1.1 If the data are not to be made available to the public at all, or with limitations, provide a valid reason.

Data from EX integrated systems shall be partitioned into restricted and non-restricted access. The science data including the sampling database, the environmental data from the vessel and submersibles, and the underwater video and imagery will be managed also by the DSCRTP.

7.1.2 If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure.

Account access to mission systems are maintained and controlled by the Program. Data access prior to public accessibility is documented through the use of Data Request forms and standard operating procedures. Data corresponding to exploration of a marine archaeological site will not be released for public access.

7.2 Name and URL of organization or facility providing data access.

Org: NCEI for EX data; DSCRTP for Deep Sea Corals data

URL: <http://explore.noaa.gov/digitalatlas> for EX data; <https://deepseacoraldata.noaa.gov/> for DSC data

7.3 Approximate delay between data collection and dissemination. By what authority?

Hold Time: Data from the EX is not proprietary and will be released as soon as possible - usually 30-60 days.

Authority: Data surrounding to a marine archaeological site will not be released due to the National Historic Okeanos Explorer (EX1504L3): CAPSTONE Leg III: Main Hawaiian Islands and Geologists Seamounts (ROV/Mapping)

Preservation Act of 1966.

7.4 Prepare a Data Access Statement

No data access constraints, unless data are protected under the National Historic Preservation Act of 1966.

8. Data Preservation and Protection

8.1 Actual or planned long-term data archive location:

Data from this mission will be preserved and stewarded through the NOAA National Data Centers and the Deep Sea Corals Research and Technology Program. Refer to the Okeanos Explorer FY15 Data Management Plan at NOAA's EDMC DMP Repository (EX_FY15_DMP_Final.pdf) for detailed descriptions of the processes, procedures, and partners involved in this collaborative effort.

8.2 If no archive planned, why?

8.3 If any delay between data collection and submission to an archive facility, please explain.

30-60 days

8.4 How will data be protected from accidental or malicious modification or deletion?

Data management standard operating procedures minimizing accidental or malicious modification or deletion are in place aboard the Okeanos Explorer and will be enforced.

8.5 Prepare a Data Use Statement

Data use shall be credited to NOAA Office of Ocean Exploration and Research and the NOAA Deep Sea Corals Research and Technology Program.